

REMARKS

Claims 1-20 are currently pending. Claims 1-15 were allowed. Claims 16-18 were rejected. Claim 10 is amended to correct a typographical error. Claims 19 and 20 have been added.

The Examiner rejected claims 16-18 under 35 U.S.C. §102(e) as being anticipated by Hein, U.S. Patent No. 6,104,794. Applicants respectfully submit that Hein does not anticipate claim 16 and that all claims are in condition for allowance.

Claim 16 claims a method for minimizing an overall voltage during a ring function, including the steps of applying a tip ringing signal to a tip terminal, applying a ring ringing signal to a first terminal of a network, attenuating the ring ringing signal through a capacitive network, and applying the attenuated ring ringing signal to the ring terminal. As the claim clearly indicates, the ring ringing signal is attenuated before it is applied to the ring terminal. At the moment the signal is applied to the ring terminal, it has already been attenuated.

Hein does not teach the elements in claim 16. As examiner correctly points out, Hein teaches a method of minimizing an overall voltage during a ringing function whereby a capacitive interface operates to linearly attenuate the TIP/RING signal voltage levels from the high phone line levels to levels within integrated circuit technology limitations. (Col. 25, lines 9-21) As indicated by the phrase "from the high phone line levels to levels within integrated circuit technology limitations," the attenuation necessarily occurs after receiving the signal at the ring terminal. Therefore, the ringer signal is first sent across the telephone line, then received at the ring terminal, then attenuated. At the moment the signal is applied to the ring terminal, it has not yet been attenuated.

Because claim 16 acts to attenuate the ring ringing signal before it is applied to a ring terminal and Hein teaches the method of attenuating the signal after receiving the signal at the ring terminal, the present invention is patentable over Hein. Transposing the order of the two steps (attenuation & applying the signal to the ring terminal) is a significant advance in the art, and leads to notably different behavior. By way of a non-limiting example, in one embodiment of the present invention, the ring ringing signal is sent over a telephone line at reduced-voltage, made possible because the attenuation occurs prior to the signal being applied to the ring

terminal. The method taught by Hein would not allow the transmission of an attenuated signal because it requires the receipt of the signal by the ring terminal first. As another non-limiting example, the teachings of Hein are applicable only at the user outlet, after transmission across telephone lines. In contrast, one embodiment of the present invention allows attenuation in the telephone exchange. As above, this allows transmission across telephone lines of a reduced-voltage signal, a result not attainable under the teachings of Hein. Therefore, claim 16 is patentable over Hein and is in condition for allowance.

Claims 17 and 18 are dependent on claim 16 and are therefore in condition for allowance.

Claim 19 is added to this application, and is directed to a method for minimizing an overall voltage during a ring function, comprising the steps of applying a tip signal to a tip terminal, applying a ring signal to a first terminal of a network, attenuating the ring signal through a capacitor connected in parallel with a reverse-biased diode, and applying the attenuated ring signal to a ring terminal. The claim offers notable advances over the prior art because it allows bi-directional handling of signals. As the claim reads, a ring signal flowing in one direction is attenuated by the capacitor. Additionally, when a positive bias occurs in the other direction, the capacitor is shorted, allowing the current produced by the bias to flow unaltered by the capacitor. Claim 20 is dependent on claim 19 and is therefore in condition for allowance. It is respectfully requested that claims 19 and 20 be entered in the application.

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All of the claims remaining in the application are now clearly allowable.
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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